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# **INDUSTRIKOMPONENTER A/S**

Energivej 33 DK-2750 Ballerup



#### ANVENDELSE

Pull-rope emergency stop switches type PRS are used in accordance with the requirements of EN 620 as well as BGI 710 and in conformity with DIN EN ISO 13850 as emergency stop devices as supplementary safety measures on conveyor belt systems. The pull rope is symmetrically tensioned on both sides of the red release lever.

The exclusive use of glass fiber reinforced plastic and stainless steel is designed especially for applications in harsh environments such as potassium salt and rock salt factories, seaports and urea, recycling and composting facilities.

With the pull-rope system functionally aligned, the emergency stop signal can be triggered over a distance of up to about 100 m for each switch.

Pull-rope emergency stop switch types PRS comply with Machinery Directive 2006/42/EC.

They must only be used in control electrical circuits.

The PRS glass fiber reinforced plastic housing offers space for 2 NC and 1 changeover contact. The versions PRS 101/102 use also a NO contact for a signal lamp.

Taking into consideration the safety data and maintenance recommendations, the pull-rope emergency stop switch type PRS can be used in safety circuits in accordance with DIN EN ISO 13849 up to Performance Level c (PLc).

#### **FUNKTION**

The pull-rope emergency stop switch is actuated by a pull rope (1) connected on both sides of the red release lever.

The switching of the pull rope switch is controlled by a cam and supported by a spring function (snap action). The self-cleaning contacts are actuated simultaneously and it may be carried out a cross comparison of the contacts of an external control unit.

The emergency stop signal is performed with positive-making normally closed (NC) contacts in accordance with the closed circuit principle.

After the emergency stop function is triggered, the switching mechanism is locked in the shut-off position "0". The signal lamp in the lid of PRS 101 or 102 is switched on. When the blue reset lever is actuated in switch position -21", the switching contacts are reactivated, the signal lamp is off and the conveyor belt is prepared for being turned back on again.

Resetting the pull-rope emergency stop switch must not cause the conveyor system to start up.

#### **TEKNISKE DATA**

Betegnelse	Wirenødstopssystem type PRS. Nødstop med låsestop			
Aktivering	Bidirectional; spring-loaded ("snap action")			
Enhed overholder	DIN EN ISO 13850, DIN EN 60947-5-5, DIN EN 60947-5-1			
Egnet til	Control units and systems i overenstemmelse med DIN EN 60204			
FUNKTION				
Materiel	Kabinet: PBT GF20; gul (RAL 1004); Release lever: rød (RAL 3000); Reset lever: Blå (RAL 5010)			
Installation position	lodret, vinkel op til 15°			
Montering	2 reinforced holes for M6 scres			
Wire længde	Up til ca. 100m			
Vægt	0,5 kg			
Actuation force	30 N ±10 N			

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#### **TEKNISKE DATA (cont'd)**

Elektrisk system				
Switching System	PRS 001 2 cam operated postive opening switches, 1 changeover contact (SPDT) PRS 101/102 additionally 1 N.O. for lamp			
Kabelindføring	Threaded holes 3 x M25 x 1,5 mm with dummy screws, 1 x cable gland enclosed (sealing area Ø9mm til Ø17mm)			
Brydeevne	AC-15: 230 V / 1,5 A; DC-13: 24 V / 2 A; DC-13: 60 V / 0,5 A			
Connection cross section	1 mm² til 2,5 mm²			
Protective conductor connection	No connector, protection class I			
Nominel isolering spænding U <sub>i</sub>	250 V			
Rated impulse withstand voltage $U_{imp}$	2,5 kV, degree of pollution III			
Konventionel termisk strøm $I_{th}$	6 A			
Contact reliability	10 millioner switching operations			
Signal Lamp	4 x LED in the lid			
Voltage Ub for the signal lamp	PRS 101: 230 V AC. PRS 102: 24 V DC			
Current consumption of lamp	ca. 20 mA			
Omgivelsestemperatur i overensstem	melse med DIN EN 60947-5-5			
Tilladt omgivelsestemperatur	-25 °C til +70 °C			
Tætningsgrad	IP 67 (EN 60529)			
Sikkerhedsdata i overensstemmelse n	ned DIN EN ISO 13849 og EN 61062:			
Safety functions	Nødstop inkl. låsestop, Manual reset			
Usable in safety circuits	Op til PLc (depending on customer application (DIN EN ISO 13849))			
B10d-value	10.000 aktiveringer			

#### **SELECTION TABLE**

Switch Type	NC	SPDT	NO	Integrated signal lamp
PRS 001	2	1	-	-
PRS 101	2	1	(1)	LED 230 V AC
PRS 102	2	1	(1)	LED 24 V DC

#### **MONTERING**

Pull-rope emergency stop switches of types PRS are centered between the anchor hooks (3) of the pull-rope system and each fastened to the substructure in installation position with 2x M6 screws.

Electrical connection is performed with the device open using the screwed cable gland included in the delivery, directly on the terminal block [X10] to [X22] (see the connection drawings).

The signal lamp of DC-Variant PRS 102 can be connected without regarding the polarity of the voltage.

The pull-rope 1 is tensioned by tension springs 2 between the anchor hooks 3 and fastened onto the red release lever.

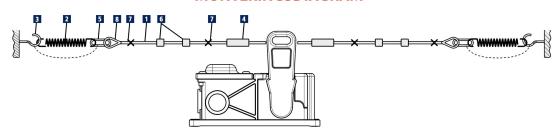
After the tension springs 2 have been adjusted, the actuation force and path for triggering the switch must be tested to ensure compliance with specified requirements.

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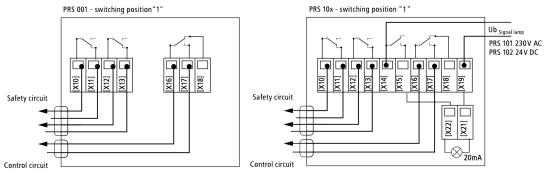
### **MONTERINGSDIAGRAM**



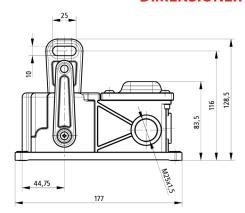
- 1 Pull rope 2 Tension spring
- Turnbuckle
- 7 Clamp (2x) 8 Thimble

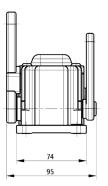
- 3 Anchor hook
- 5 Quick link 6 Rope support

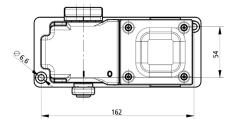
#### **CONNECTION DRAWING**



#### **DIMENSIONER**







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